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ABSTRACT

This bulletin contains the Proceedings of a conference on Fcllow Through held on December 9-10, 1969, at the University of Florida. The conference was sponsored by the Florida Department of Education, the Institute for Development of Human Resources, and the Florida Educational Research and Development Council. The purpose of this conference was to inform Florida school systems with Year-Round Head Start, Summer Head Start, and early childhood people, in general, about Follow Through--what it is, what educational innovations are being developed and tried, what practices might be adapted to local programs. Included is a discussion of Follow Through from people at various levels of the program: the National Director of Follow Through, the Florida Department of Education's Early Childhood Consultant, two Follow Through model sponsors, three Florida people at the school district level who are involved daily in the program, a view of supplemental services available through Follow Through, a researcher's view of the evaluation process used on Follow Through models, and a projection of what problems education will face in the 70's. The appendix includes a list of Follow Through Program sponsors. (Author/AJ)

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Proceedings

of

FOLLOW THROUGH CONFERENCE*

Edited by

William F. Breivogel

Sponsored by

Florida Department of Education

Institute for Development of Human Resources

Florida Educational Research and Development Council

University of Florida
Gainesville, Florida

December 9-10, 1969

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Preface

This Bulletin contains the Proceedings of a Conference on Follow Through held on December 9-10, 1969, in the J. Wayne Reitz Union of the University of Florida. The Conference was sponsored by the Florida Department of Education, the Institute for Development of Human Resources, and the Florida Educational Research and Development Council with a Follow Through State Technical Assistance Grant from the U. S. Office of Education to the Florida Department of Education.

The purpose of this Conference was to inform Florida school systems with Year-Round Head Start, Summer Head Start, and early childhood people in general about Follow Through--what it is, what educational innovations are being developed and tried, what educational practices might be adapted and used in local early childhood programs.

Briefly, Follow Through is an early childhood program for children from poverty areas. It's purpose is to reinforce and extend gains made in Head Start and other quality prekindergarten programs as children enter public school kindergarten and primary grades. Follow Through is funded by the Office of Economic Opportunity and administered by the U. S. Office of Education. The following agencies cooperate in this program: State Departments of Education and U. S. Office of Education, local communities, model sponsors, other state agencies and general consultants.

In 1969, there are more than 140 Follow Through projects with 37,000 children enrolled nationwide.* Twenty program models are in

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*Minnie Lee Rowland discusses what is happening in Florida in "Introduction to Florida Follow Through."

operation throughout the country.* Two of the twenty models are discussed in this Conference--the Ypsilanti Model sponsored by Dave Weikart, and the Florida Parent Education Follow Through Model sponsored by Ira Gordon and the Institute for Development of Human Resources at the University of Florida. The communities adopting a model receive continuing assistance from the program sponsor in the form of consulting services aimed at developing and implementing the approach selected.

The approaches vary from highly-structured, academically-oriented models to developmental, child-centered programs to models based on parent education. Various approaches are being tried with the hope that the research and development data which are coming from these models will have significant implications for early childhood education generally and for the education of disadvantaged children in particular. The objective is to find what parts of the various models appear to be most successful. Stanford Research Institute is funded for a national evaluation to compare student, teacher, and parent growth and institutional change among the various programs and with the same program approaches in different environmental settings.** In addition, program sponsors attempt to evaluate their own approaches and to make changes in their on-going programs.

In the following pages you will find a discussion of what is happening in Follow Through from people at various levels of the program: the National Director of Follow Through, the Florida Department of

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*See Appendix A for a list of the twenty Follow Through Models.

**Robert S. Soar discusses one part of the evaluation process in his paper "Follow Through Model Implementation."

Education's Early Childhood Consultant, two Follow Through model sponsors, three Florida people at the school district level who are involved daily in the Follow Through program, a view of supplemental services available through Follow Through, a researcher's view of the evaluation process involved in looking at classes serving Follow Through models. Finally, a projection of what problems education will face in the 70's was presented by Ira Gordon, Director of the Institute for Development of Human Resources.

No attempt was made to reproduce in this Bulletin everything that took place at the Conference. We would like to acknowledge and express our gratitude to all participants and contributors of the Conference, especially the following people from the Jacksonville Follow Through model: Mrs. Alvinia L. Scriven, Supervisor; Mrs. Verdell Jefferson, Parent Educator; Mrs. Inez Williams, Parent; Mr. Russell O. Alderman, Coordinator, who were responsible for a role-playing presentation which demonstrated the roles played by the parent educator, parent, and teacher in the Florida Parent Education Follow Through Model.

William F. Breivogel

Gainesville, Florida
April 1970

FLORIDA FOLLOW THROUGH

Minnie Lee Rowland*

Follow Through is a federally sponsored pilot program designed to carry the various components of Head Start into the first three years of the elementary school. Follow Through programs are placed in school districts which have either a full year Head Start or a similar early childhood program. Children who attend the program are selected from families with poverty level incomes.

Follow Through offers a comprehensive program to children with special attention to the general instructional areas as well as provision for dental, medical, nutritional, psychological, and social care. It involves parents and the community in its operational activities, and offers staff development opportunities for the professional and nonprofessional staff.

Florida Follow Through was initiated in 1967 when the Commissioner of Education and the Title I Coordinator received a letter from the U. S. Office of Education, informing them of the possibility of setting up a number of programs in the country to carry the benefits of Head Start into the first three grades. The Commissioner was asked for assistance in identifying centers in Florida with the potential for carrying out a quality program for young children. Nine districts in the State expressed

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interest at that time. Since there were to be only 30 districts to be chosen from the entire nation, it was obvious that all nine districts would not be assigned a project.

Little River School in Dade County was selected as the site for the first Follow Through Project to be established in Florida in 1967. Sulphur Springs School in Hillsborough County was chosen for the second project which began operation during that same school year.

The projects selected were required to meet specific criteria, set up by the Office of Education, and financed by funds in the following proportionate amounts: Follow through - 65 percent; Title I - 15 percent, and local schools - 20 percent.

Follow Through has maintained some of the major features of the Head Start Program among which are: comprehensive services; use of school and neighborhood services; parent participation; staff development; an advisory committee composed of 50 percent parents; and employment opportunities for low income families as aides or other school workers.

While Follow Through is like Head Start in some respects, it is different in that it has shifted the emphasis to research and development. Because of its intention to extend into the elementary school, it was felt that it could provide a basis for significant longitudinal studies, and could also find ways of bridging the gap between theory and practice, and could at the same time test a number of the new ideas in a variety of approaches.

In the initiation year, the two Florida communities were permitted to set up their own approaches to the program. Each school was asked to

design, out of its own imagination, the type of program that seemed to fit the needs of the children in its own particular community.

In 1968, Okaloosa County was added to the Florida list of projects. All new Follow Through Centers established during that year were asked to follow program models developed by a program sponsor so that comparative results would be obtained from the various approaches. Okaloosa County chose the Ypsilanti model sponsored by Dr. Dave Weikart, which is cognitively oriented, based on the developmental theory of Piaget.

In 1969, Duval County was added to the list of funded projects. Hillsborough County decided to select a program model at this time. Both Duval and Hillsborough Counties are now following the Parent Education model sponsored by Dr. Ira Gordon of the University of Florida.

While all of the programs now in operation are following somewhat different models, they are all working within the comprehensive program of educational, nutritional, medical, dental, and psychological context.

Although there are only four programs in Florida which are federally funded this year, many schools and communities are using Follow Through ideas on a more limited basis. The actual facts of federal funding have not deterred them completely. Some have used Title I, Title III, and funds from other sources in an effort to develop an individual approach to instruction and other services by multidisciplinary team approach. Furthermore, they seem convinced that learning is affected substantially by medical, social, dental, nutritional, and psychological as well as instructional problems, and that the schools and communities must face up to the responsibility of meeting needs in all these areas.

One of the most exciting things about Follow Through is the sense of commitment that prevails through the entire program. Every activity seems to be developed with the purpose of extending and expanding experiences for these children.

Some of the programs are now in the third year of operation and others are pushing forward. As the conference continues, you will hear more about the details of the Florida programs from the active participants themselves. The experiences of these experimental centers -- both their successes and failures -- may cause us to take a more pointed look at what we are doing, and may challenge us to reexamine some of our time-worn concepts about early childhool education. Furthermore, they may furnish us valuable information and clues for providing continuity in programs for young children. If, indeed, this is the case, the implications are clear. We must extend the Follow Through concept to more and more of Florida's children.

FOLLOW THROUGH: A PROGRAM OF OPPORTUNITIES AND OBLIGATIONS

Robert L. Egbert*

There are a lot of people in this audience who are associated with Follow Through in one way or another -- as program sponsors, State Follow Through coordinators, local community people, general consultants, and others -- and I have come to have a very deep respect for their dedication and ability. As you become acquainted with them here and elsewhere, I am sure you will share my respect for them.

This morning I would like to talk first about what I consider to be opportunities for those of us who work with Follow Through; next, to tell you something about the program; and finally, to talk about the obligations of people who associate themselves with Follow Through because I think each of us does have serious obligations.

Follow Through is indeed a program of opportunities. It is a program of opportunities this year for over 37,000 poor children in more than 140 communities. Projects range in size from Stewarts Point, California, which has a total of perhaps a dozen children in grades 1-3, to Philadelphia, which has almost 3,300 children in a Follow Through Project which derives more than half of its support from ESEA Title I. There are Follow Through projects from Van Buren, Maine on the Canadian border to Dade County, Florida; from Hillsborough County, Florida to Honolulu, Hawaii to Hoonah, Alaska, and if you know where Hoonah is you are much better educated

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*National Director of Follow Through Programs, U. S. Office of Education, Washington, D. C.

geographically than I was a year ago.

Follow Through is an opportunity for these 37,000 children across the country to see their parents involved in an educational program in a way that most children do not. It is an opportunity for these youngsters to receive support from their parents because the parents are directly involved in the Follow Through program. It is an opportunity for these 37,000 children to receive special attention in the classroom (attention that cannot possibly be given in a regular school classroom), because the adult-child ratio in Follow Through is markedly lower than it is in a typical kindergarten, first, or second grade classroom. I do not know what the typical adult-child ratio is in Florida, but I am sure it is not the approximately one adult to 13-14 children that there is in Follow Through. Nationwide, Follow Through has two adults -- one teacher and one aide -- in each classroom with approximately 27 children.

Follow Through is an opportunity for children to go to school in a program responsive to their needs, a program built for them and expressly focused on them.

Follow Through is an opportunity for 37,000 children to have health, psychological, and social services that they would not have otherwise. It is sometimes surprising to realize that some children do not have health services, partly because their parents cannot afford them, but also partly because those charged with providing such services will not offer them to certain children. Follow Through attempts to solve both sorts of problems.

Follow Through also provides the opportunity for these 37,000 children to have nutritional services, a hot lunch and, in many instances, a hot breakfast; to have additional nutritional periods during the day; to benefit

from nutrition education programs for their parents.

Follow Through is an opportunity for over 1,600 teachers to work with children individually, an opportunity they do not normally have. Can you imagine the joy of a kindergarten teacher, who is accustomed to working with 70 children during the day - 35 in the morning and another 35 in the afternoon - as is the case in some large city school systems, to find herself in a class with the same 25 children all day long, with an aide to assist her? This is a really great opportunity for a teacher who cares about children.

Follow Through is an opportunity for these 1,600 teachers to work with and have the support of parents of the children in their classes. It is an opportunity for these teachers to work with some of the nation's foremost educators, who serve as program sponsors in Follow Through. It is an opportunity for teachers to have superior support services, to know that if a child needs specialized help the teacher can call on others in the program to help in working with that child.

Follow Through is an opportunity, not only for children and teachers, but for total communities. As I mentioned earlier, the opportunity this year extends to more than 140 communities. It is an opportunity to form a new and vital relationship between the school and the community, a relationship in which parents and others on the Policy Advisory Committee sit in consultation with the school about its Follow Through project and about children in that project.

Follow Through is an opportunity to bring about change in our educational system. One large city has decided that, because of the promise of Follow Through, it will devote a significant portion of its Title I

(Elementary and Secondary Education Act) funds to the program. This city is making available about $1.5 million in Title I funds for its Follow Through project. Follow Through schools in this system are working with seven different program sponsors. The community is using Follow Through as a vehicle to help move from a highly centralized administration to a decentralized administration, so that separate districts can become more responsive to the needs of the people in the local area. The community is involving local superintendents and principals in planning the Follow Through project so that they will understand Follow Through goals, will be sympathetic with the program, and will really want it as a functioning part of their school system.

Follow Through is an opportunity for these 140 communities to receive continuing support from state and national Follow Through officials and from program sponsors. Follow Through is an opportunity for these communities to participate in what I consider the most promising, most exciting, most complex and, in some ways, the most frightening nationwide educational "experiment" ever tried. And in many ways Follow Through is, above all, an opportunity to have funds to do things these communities would have liked to do before but could not afford. Can you imagine a local community that is now spending $300 per child at the elementary level having an additional $750 per child to focus on a particular group of children? It is indeed a fine opportunity for local communities to accomplish some of the things they have wanted to do but simply have not had the funds to do so.

Follow Through is an opportunity for American education to learn about new ways of implementing educational programs, and about the success

of these programs with different groups of children under various circumstances. Follow Through is an opportunity for American education to develop new patterns of working with school patterns such as those of the various sponsors, for the sponsor relationship is, we think, in itself a significant contribution.

Follow Through is an opportunity for American education to explore new types of Federal, State, and local relationships. Involved with Follow Through are 49 state educational agencies, 49 state Economic Opportunity Offices, plus the District of Columbia and Puerto Rico.

I should now like to devote a few moments to a historical perspective of Follow Through. Follow Through grew out of Head Start experience. By fall 1966, following about a year and one-half experience with Head Start, some people had decided that if Head Start were to realize its ultimate potential, there must be something to follow up on this preschool experience for children. At that time, Sargeant Shriver, then Director of the Office of Economic Opportunity, requested a Follow Through program. In his message to Congress on children and youth in February, 1967, the President requested authorization for the Follow Through program and asked for initial funding of $120 million. The intention was that Follow Through would be a program designed to serve all the graduates of full-year Head Start programs. Of course, $120 million was clearly inadequate to follow up on a $350 million program, but that problem was solved by allocating not $120 million but $15 million -- $15 million spread over two years instead of one. We had $4 million for projects in school year 1967-68 when Dade County and Hillsborough County came into the program, and we had $11 million in 1968-69 when Okaloosa County entered Follow Through. This year when Duval County

joined the program, Follow Through has approximately $32 million. Next year it is planned that we will have approximately $56 million.

The funding pattern just described is unusual. In fact, there is a quality about it that is almost unreal. Programs do not start at one funding level and then receive more money; they start at one level and then, as inflation increases, they receive less money because somehow there seems to be an inverse relationship between inflation and the amount of money given to schools. I do not understand that, but then I am not an economist.

In Follow Through we have indeed been fortunate in having an increasing funding pattern. Children enter Follow Through in the earliest grade level and then progress with the program through the primary grades. Thus, just to maintain current projects, with an additional grade added each year, we need increasing funding levels.

When Follow Through became a $15 million instead of $120 million program, we decided that Follow Through could best serve the children it was not able to reach directly by engaging in a program development activity that would permit the development of new relationships and new patterns of working with children, that would make a significant contribution to early childhood education generally. Hence, the Follow Through research and development program was initiated.

I think it is critically important to recognize that, although Follow Through in its present phase is a research and development program, it is also a service program designed specifically to serve those children and communities in which it is located. Sometimes we have difficulty in helping people to understand that when Follow Through was made a research

and development program, nothing was changed in our authorizing legislation. The legislation states, in effect, that we should offer a program of comprehensive services to children; that parents and other community people should be involved in the development of the program; and that we should consider Follow Through as part of the nation's total community action program.

Follow Through is funded under the Economic Opportunity Act, and because of this we have a responsibility to carry out the intent of community action in Follow Through projects. Occasionally, conducting a research program in a community action setting becomes very complex. This very complexity stems from the same source as much of Follow Through's vigor and promise, i.e., the fact that Follow Through projects are not simply education projects but are, indeed, full-bloom community action projects -- projects whose aim is to help the local school system become better adapted and more responsive to the needs of its children.

In the Follow Through Research and Development Program, we established a pattern which we have termed "planned variation." Inherent in the notion of "planned variation" is the suggestion that each community will be asked to choose from a set of program sponsors the one with which it would like to associate. A program sponsor is an institution which has developed a philosophically coherent, implementable approach to working with young children or their families. This year we have 20 program sponsors, one of which is the University of Florida. Sponsors play a control role in the total Follow Through program.

The community selects the program sponsor with which it wants to associate. The two then work together to develop the specific program for

that community. The program sponsor has the responsibility first, to develop the approach and, second, to serve as an outside resource, a training agent, a source of program constancy to insure that not only is the program concept transmitted to the community, but that the community has constant feedback on how well it is implementing the program.

Because we ask local communities to choose a sponsor, some sponsors are working with more communities than do others. This year the number of communities working with a given sponsor ranges from 1 to 18.

Sponsor approaches include instructional programs for the children, parent education, approaches such as the University of Florida model; community-parent control such as the Morgan Community School in Washington, D. C., and the College Station School in Pulaski County, Arkansas.

In addition to program sponsors, we also have arranged for general consultants to work with local communities. General consultants are people who have demonstrated an ability and interest in working with communities to help them develop total programs. General consultants work in cooperation with our office and with program sponsors.

We began this morning by talking about opportunities in Follow Through but associated with opportunities are obligations which must be met. In the case of Follow Through, these associated obligations are diverse, depending upon the group concerned.

Parents have an obligation to Follow Through. They have an obligation to accept responsibility for serving and for working effectively on the local Policy Advisory Committee. They have an obligation to participate in parent education programs and other parent activities. Many parents have been called on to come into the school and work with children on their hobbies,

or just to talk with them about what they do in their daily lives. Parents have established community gardens in which they have raised food for the Follow Through program, and others have participated in carpentry projects. In short, parents have an obligation to work with and for their children in the program.

School administrators have an obligation to Follow Through. I am very sympathetic with school administrators because if they are going to be involved with Follow Through they must be willing to gamble. The administrator must be willing to gamble on the program approach, which requires schools to behave differently. I recently saw figures which suggested that some 75-80 percent of the teachers in a sample survey last year said that the program approach required them to teach in ways that were new to them; less than ten percent said they could still teach essentially the same way they had taught in the past. Any administrator who is willing to adopt a program that requires over 75 percent of his staff to teach differently must be willing to gamble.

The administrator also must be willing to gamble on the capacity of the program sponsor to implement his program, for program sponsors not only must conceptualize programs, they also must implement them, and that is a tough job.

The school administrator must be willing to gamble on us at the national level. He must be willing to gamble on our capacity to work effectively with him. He has to take a chance on our capacity to secure continued funding for the program because nothing would be more destructive to his school or community than to have the program come in for two years and then have the funding discontinued.

The school administrator must be willing to share responsibility in a way that he has not been called upon to share it before and, believe me, we appreciate his willingness to do this because we know what it means. He has to share responsibility now, not only with his board of education, but with the Policy Advisory Committee, the program sponsor, the general consultant, and those of us in the state national offices. He has to be willing to work unusually hard. We understand the commitment he makes and we do appreciate it.

The program sponsor has some obligations, too. He must be willing to accept responsibility for continued program development. Conceptualizing a program in the university setting is not enough; that program must be conceptualized and developed so that it will work in the school, all the way from kindergarten through grade three.

The sponsor must be willing to organize so that he can effectively serve a number of communities. He must be willing to work with diverse groups. He must be willing to expose himself to the world -- and this must be one of the most difficult things that program sponsors do. Most program sponsors are university people whose primary experience is conducting research and teaching college students. In Follow Through we ask them to expose themselves to a number of communities and different groups -- both in program development and implementation and in the national evaluation. Ultimately we will begin to get feedback that will tell them and others how successful they have been under various circumstances. This sort of exposure can be good -- but it must be very frightening also.

In Follow Through, state personnel have to be willing to share responsibility with the federal government, with sponsors, and with general

consultants. State deparments of education over the years have developed strong, supportive relationships with local communities. We recognize this and are glad that such has been the case. Follow Through is a program that cannot possibly succeed unless state educational agencies and economic opportunity offices are willing to share with us some of their relationships with local districts, because Follow Through has to be a coordinated effort at the national level. We recognize that this is an unusual request of states, and we appreciate the way in which they have responded.

In sum, then, Follow Through provides opportunities and obligations for children, for parents, for teachers, administrators, communities, program sponsors, general consultants, and for state and national staff. Over and above these groups, Follow Through provides opportunities and obligations for the total country.

Our country has the opportunity through the Follow Through program, to demonstrate its confidence in its educators and its people. It has the obligation, I think, too, if it really faces the task, to provide better opportunities for children of the poor. It has the opportunity over the next generation of developing a substantially better society in which all of us can live. And, as we have indicated, in Follow Through our country has the opportunity to develop knowledge and the capacity to act on that knowledge.

THE DADE COUNTY MODEL - AN OVERVIEW

Della A. Zaher*

The Follow Through Project in Miami, Florida, is located in Little River Elementary School. It was chosen as one of the original 30 Follow Through Projects and is now in its third year of operation. The ethnic make-up of the 462 children, which are divided into 14 multigrouped classes, is 25 percent Caucasian, 25 percent Negro, 50 percent Spanish speaking, of which 25 percent are Puerto Rican and 25 percent are Cuban.

The Dade County program is a self-sponsored project providing its own curriculum design developed by the staff and parents, and in-service training for the staff. Our primary emphasis is on individual instruction through Language Experiences in Reading (LEIR), Perceptual-Motor Training, and the use of Cuisenaire Rods in Arithmetic. The Language Experience Approach capitalizes on the child's own language, giving him an opportunity to come to school with his own language accepted by the teacher. The Language Experience Approach involves the telling of stories by children as the teacher or aide prints them on the board, or uses a felt pen to record them directly on a chart. The dictation of stories can be an individual accomplishment, or it can represent the work of a group. As the child's ability develops, he can write his own stories independently and put them into book form. Recognizing that the child's success in reading is influenced by his

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spoken vocabulary, the teacher encourages the pupils to express their thoughts orally, to paint, and to use other means of expression. This approach creates a favorable attitude toward reading, giving him many successful experiences, helps the pupil understand the relationships existing among the various communication skills, and fosters creative expression. Many of the stories grow out of the everyday experiences of the children, such as field trips that are taken once a month, and incidents that occur in the school. These books, written by the children, then become the basis for their reading material, not only for themselves, but others.

Perceptual-Motor Training is provided in this program. Those children identified by the Purdue Perceptual-Motor Survey as being in need of further in-depth perceptual-motor training, are provided an individualized program of perceptual activities. The program is planned by the teacher and paraprofessionals to overcome the lag in perceptual development. Activities are selected from resources developed by Marianne Frostig, Robert Vallett, and Newell Kephart.

Cuisenaire rods form the basis for our arithmetic program. A teacher who attended a two-week Cuisenaire workshop sponsored by The Cuisenaire Company of America, serves as a resource person in assisting other staff members in the use of the rods. These colored sticks permit children the direct visual exploration of the operations and relationships of elementary mathematics.

Implementation of the instructional program is guided by a full-time in-service coordinator. Weekly small group seminars are held for the

classroom team which includes the teacher leader, teacher assistant, and aide. Separate parent in-service workshops are held in the home and at school to demonstrate activities which the parent may follow up in the home with his child. A special effort has been made to employ parents as aides in the classroom. This has been very successful in our community. One-third of the paraprofessionals are involved in a supplementary training program at the University of Miami, and at Dade County Junior College. Dr. Alma David is the project manager receiving funds from Educational Projects Incorporated in Washington, D. C. Head Start aides that have completed 60 hours of college credit are eligible to move into a teacher assistant position for Follow Through, thus providing a salary increase and an advancement in position. The results of this program are evident by the fact that one of the Head Start aides moved up the career ladder to a teacher assistant position, and is now the parent coordinator for our project. She will be the first paraprofessional in the nation to graduate this June through supplementary training.

Workshops featuring outstanding authorities in child development and related areas are presented approximately once a month. Some of the consultants that have participated in our workshops are Dr. William Glasser, author of Schools Without Failure, Dr. Paul Torrance, Dr. Carl Bereiter, and Dr. Roach Van Allen.

An interdisciplinary team comprised of the guidance specialist, the social worker, the parent coordinator, two parent-social work assistants, and the nurse, coordinate the pupil personnel services. The Pupil Personnel Team meets daily with one of the 14 teaching teams during the afternoon for

a one-hour case conference to discuss a team approach for assisting the teacher in understanding the individual needs of each child. An on-going plan of action to help the child adjust academically, emotionally, and socially, according to his own capabilities, is developed through this team approach. Each member of the team contributes pertinent information from his own specialized field. Follow-up and evaluation of the specific action taken for each child by each team member is continued at the next case conference within three weeks.

In addition to serving as a member of the Pupil Personnel Team, the guidance specialist offers counseling to pupils, both on an individual and small group basis. She also works with the teachers in using techniques for developing a wholesome, supportive classroom climate which will promote a positive self-concept for each child.

The social worker is responsible for working with community agencies that make their services available to the project.

The parent coordinator, along with the two parent social-work assistants, plans and implements the parent participation program, providing a link between the home, the school, and the community.

The parents play a vital part in our program by actively participating in program planning and operation, and serving on the Policy Advisory Committee, where their ideas are openly expressed and considered.

The medical program is coordinated by a part-time pediatrician and a full-time nurse. A comprehensive program is provided through complete physical examinations, immunizations, screening tests - vision, hearing, urinalysis, hemoglobin, tuberculin - and complete evaluation and treatment

of all medical problems discovered. Instruction is provided by the nurse in the classroom and in the home for parents on developing good health habits. Dental services are provided by two local dentists in their offices and the Dade County Health Department. This includes examination and x-ray, fluoride application, cleaning, and dental treatment.

The nutritional program makes available a breakfast and hot lunch.

The Date County Project is a part of the national evaluation conducted by Stanford Research Institute. Our local efforts include diagnosis of children's needs through individual administration of testing instruments specifically in the area of perceptual development and self-concept.

Imagination and creativity -- along with the use of a variety of approaches -- seems to be the "skeleton key" for reaching the children of this area.

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A slide review was given after the oral presentation and these slides may be obtained on a loan-out basis by contacting:

Mrs. Della A. Zaher, Director
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THE YPSILANTI (WEIKART) MODEL

Roger Rugg*

The Follow Through approach employed to deal with the problems of the potentially under-achieving children in Okaloosa County, is the cognitively oriented program modeled after the Ypsilanti, Michigan, preschool program. The Ypsilanti Perry Preschool Project, under the direction of Dave Weikart, was initiated in Ypsilanti Public Schools in the fall of 1962, as a long-term developmental effort to assist educationally disadvantaged Negro children develop the concepts and abilities necessary for academic success in the public schools. Starting with a structured curriculum in 1962, the program emphasis was on visual motor skills, number concepts, and language enrichment activities. The primary teaching technique was verbal bombardment which the teachers employed to direct the child's attention to the critical aspects of experience. An essential component of the program was weekly home visits to each family to permit the involvement of the mother in the educative process. In the spring of 1964, increased interest in Piagetian theory, advice from language consultants, and assistance from Sarah Smilansky regarding pupil planning, dramatic play, and impulse control activities, laid the foundation for the alteration of the program into the current framework described primarily in Piagetian terms. Based upon the data from the five-year follow-up period in the elementary grades, the project has been successful in obtaining average

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achievement and social-emotional adjustment in about half of the participating children. This finding stands in sharp contrast with the fact that fewer than 100 percent of children who were unable to participate in the project (the control group), have achieved similar standings in school. As data from later years of the project become available, it is expected that this rate of difference in school success will be maintained or increased.

The main objective of this Follow Through Project is educational reform through the involvement of teachers in the development of a structured curriculum, which can be implemented within the context of their own classroom, which supports the development of essential educational attitudes and cognitive habits in children. The main outcome of the project will be improved school performance by participating disadvantaged children.

One school system in Okaloosa County, Florida, which has adopted our model for their Follow Through Project, is now in its second year of operation. It is comprised of eight classrooms in two schools. Each school maintains two first grade classes and two second grade classes. Each classroom has two certified teachers and one teacher aide. A Curriculum Supervisor is provided for each school. It is the responsibility of the Curriculum Supervisor to:

(1) keep the teachers oriented toward the specific goals of the model, and

(2) insure the success of the team teaching relationship by acting as a "third party" who recognizes problems or potential problems when they

arise and then takes the necessary and appropriate action.

Our Follow Through classrooms have no individual tables or desks. In the place of desks are two kidney-shaped tables used as "teaching centers" where direct instruction takes place by each teacher. Typically, the class is divided into three groups of about eight children each. While two groups are involved at the teaching centers, the remaining third are working independently at "interest centers." These include art areas, quiet or reading areas, discovery or science areas, and in the first grade, dress-up areas. To insure responsible behavior and impulse control, careful planning is conducted between the children and the teachers before the children go to the different free areas. At the end of the day, there is also an evaluation time when children report on their independent activities.

Teacher planning and adequate supervision are essential features of the program. While the project provides general guides toward major curriculum goals, it is the teacher's responsibility to make detailed lesson plans so that the general goals will be appropriate to her class, and the necessary adjustments will be made for individual students who need additional assistance. Cookbook plans for daily activities, etc., are not provided by the project. The importance of teacher involvement in the program, because it is really hers, cannot be over emphasized.

In order for teacher lesson planning to be successful, adequate supervision must be provided. The supervisor role includes direct participation in the development of daily lesson plans, continued observation of children in the teaching situation, and the provision of theoretical knowledge about the curriculum. This direct focus on the daily operation of

the curriculum keeps the teacher working toward the overall goals and forces "public" discussion of the program, avoiding the traditional role of the teacher as an artist with a "private" and intuitive job definition. It is this blending of teacher and supervisor responsibilities that seems to produce the commitment to the program so characteristic of successful intervention projects.

Teachers frequently comment, "But we do this already," when first exposed to our program. The cognitively oriented curriculum does employ many traditional preschool activities. In addition, it requires a high degree of awareness of the development of each child on the part of the teacher so that she may select and structure the correct sequence of activities and experiences for the child's level of ability. This responsibility requires the teacher to employ carefully sequenced activities and to be highly analytic of her own teaching contact time with each child. Child growth in cognitive habits and educational attitudes is the product of intensive teacher thought, followed by the careful application of specific teaching methodology.

The model program staff is responsible for the development of the curriculum to be employed in the centers, the training of all personnel, the supervision of the implementation of the model, the provision of consultant service, and the evaluation of the programs.

Three weeks of each month are devoted to curriculum development. The project director, the project supervisor (drawn from the staff of the Ypsilanti model project), and the project liaison staff design and try out the specific curriculum activities to be recommended to each project center. Considerable attention is given to combining the focus on the development

of language skills and cognitive structures within the child, and to the careful development of basic skills such as reading and mathematics required by the school setting.

Essential to the success of the project is the careful training of the professional and paraprofessional staff of each program center. This training is carried out through a formal one-week training session conducted at the site of the participating center before school begins in the fall. This week will emphasize basic orientation to Piagetian theory and its curricular implications, development of behavioral objectives, model teaching sequences, and overall strategy for the school year. Particular emphasis is given to the role of the teacher and supervisor in achieving educational success. In addition, three-day to one-week training seminars are scheduled for mid-year and end-of-year periods.

While the formal attention to training envisioned in the above section is important, more critical is the close supervision of the actual application of the program in the individual classrooms. The liaison staff member assigned to each center spends one week each month in close contact with the staff of his center. This supervision will include observation of classroom teaching, demonstration teaching, program planning conferences, and informal training sessions. Micro-teaching is employed where feasible. Information on the success in program implementation in each center will govern the work of the curriculum development team.

In addition to the liaison staff serving each center, other staff from the Weikart model program staff provide services. For example, basic to the initial work at each center is the development of a firm foundation of "readiness" for academic work planned for later in the year. Key

trainers from the model project's staff are employed to effect this program implementation. Parent education specialists, data management personnel, etc., are drawn upon as needed. When necessary, outside consultants are utilized.

An added element in this, our second year of operation, is a carefully planned parent program, the primary objective of which is to involve the mother in the educational process of her child. To accomplish this, the program has provided four paraprofessionals who function as home teaching aides. These four women, working under the close supervision of the curriculum supervisors, visit mothers in the home, usually on a once-a-week basis. During these visits, the home teacher tutors the child in the presence of the mother. From the start the mother is encouraged to "join in" whenever she feels comfortable in doing so. Along with these visits to individual mothers, the program also conducts both small and large group meetings. The small group meetings are often an extension of the individual meetings, with the home teacher working with three or four mothers and their children at one time. The larger group meetings often focus on problems of child management and are usually conducted by the Follow Through social worker.

THE FLORIDA PARENT EDUCATION FOLLOW THROUGH MODEL

William F. Breivogel*

The Florida Parent Education Follow Through Model is based on two years of experimental field research conducted in the Early Child Stimulation Through Parent Education Project. The basic ideas and procedures of this project were adapted and extended by Ira J. Gordon into the Florida Parent Education Follow Through Model.

The basic assumptions of the original model were: (1) early intervention into the cognitive development of children, three to twenty-four months, can produce cognitive growth, (2) parent educators selected from the same low-income environment as the children can be trained to teach instructional tasks to the mother in the home which would stimulate cognitive growth for both mother and child, and (3) parent educators can help to improve the attitudes and perceptions of those people in the home toward the school and the community.

Based on these assumptions, the Florida Parent Education Follow Through Model is designed to accomplish the following objectives:

(1) To increase parental involvement in the learning and development of the child.

(2) To increase the mother's competency to help her child.

(3) To improve the mother's attitude toward self and school.

(4) To improve the home-school, school-home relationship.

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(5) To increase the school's ability to provide for the individual needs of children.

(6) To increase the child's ability, social behavior, and attitude toward himself.

In terms of the school and the community the model is designed:

(1) To change the nature of the use of nonprofessionals in classrooms.

(2) To increase the interaction between home and school, school and home, through home visitation.

Four roles are identified and developed in the Florida Parent Education Follow Through Model: Parent Educator, Teacher, Coordinator, Consultant.

A parent educator is selected from the same economic environment as that of the child. She is trained at a summer workshop at the University of Florida and in in-service activities throughout the school year to act as an educator of parents, a liaison person, and as a teaching aide to the classroom teacher. In her role as an educator of parents, she teaches instructional tasks to the mothering one in the home. These tasks are developed by the classroom teacher and parent educator, based on their observations of the child in the classroom and in the home. The home tasks are designed to supplement, reinforce, and/or extend what has been taught to the child during the school day. The underlying goal is to increase the interaction between the mother and the child.

In her role as a teaching assistant in the classroom, the parent educator works with individuals and small groups of children under the

direction of the teacher. Instructional tasks are developed and taught by the teacher to the parent educator so that she can implement them in the classroom without direct teacher supervision. In addition, the parent educator helps collect observational data on individual children, small groups, and the total class. These observations are systematic and cut across both the cognitive and affective elements of the classroom and are used by the teacher to make instructional decisions.

In her role as a liaison person, the parent educator communicates the needs of the parent to the school, school to parent, and parent to the community. She observes what medical, dental, social, or psychological services are needed in the home and acts as a referral agent to the teacher in these matters.

The teacher provides leadership for each team by assessing, planning, and providing for the educational needs of the children in and out of the classroom. She is trained and urged to use the parent educator as a teaching assistant in the classroom. A basic premise of the Florida Parent Education Follow Through Model is that as parent educators act as observers in the classroom using systematic observation instruments, information will be collected which can be translated by the teacher into instructional tasks for use in the classroom and in the home. It is the teacher's responsibility to build a working relationship between the parent educator and herself.

The coordinator's role is defined by the local community. The coordinator's responsibilities are:

(1) Coordinate the work of all teaching teams (teachers and parent educators).

(2) Provide continuing in-service training for teachers and parent educators.

(3) Modify and/or develop the curriculum.

(4) Facilitate a dialogue between the Follow Through classrooms and the instructional program of the total school; between the local Follow Through program and the Florida Parent Education Follow Through staff; and between the Parent Advisory Committee and the school system.

(5) Assist in the continuing evaluation of the Follow Through program by facilitating the flow of collected data to the University of Florida for processing; calling upon University of Florida Follow Through consultants for interpretation of results of local data collection and for his on-site assessment of the program.

The major purpose of the University of Florida consultant is to guide the development, implementation, and evaluation of the local Follow Through program. Consultants visit the local community two days a month. The schedule of consultant visits and activities is arranged by the local coordinators and may include such activities as:

(1) Visit classrooms and homes to determine how the teachers and parent educators are carrying out their roles as defined in the model.

(2) Interpret to the teachers and parent educators the data which they collected and which were processed at the University of Florida.

(3) Conduct in-service training on various aspects of the model components.

(4) Act as a liaison person between the local Follow Through program and the Follow Through staff at the University of Florida by reporting his perception of the overall progress of the model in that community and the needs of the local Follow Through program as he sees them. These reports are used as a basis for attempts to meet the needs of the local community.

(5) Meet with the Parent Advisory Committee chairman and/or group.

Data in the Florida Parent Education Follow Through Model are collected through the following instruments: Parent Educator Weekly Report, How I See Myself, Social Reaction Inventory, Children's Self Social Constructs Test, Florida Affective Categories, Teacher Practices Observation Record, Reciprocal Category System, Purdue Teacher Opinionaire, and the Home Environmental Record.

The Florida Parent Education Follow Through Model is now operative in eleven communities: Chattanooga, Tennessee; Houston, Texas; Jacksonville, Florida; Jonesboro, Arkansas; Lac du Flambeau, Wisconsin; Lawrenceburg, Indiana; Philadelphia, Pennsylvania; Richmond, Virginia; Tampa, Florida; Winnsboro, South Carolina; and Yakima, Washington. Educational Professional Development Act grants have been made to the Institute for Development of Human Resources, University of Florida, to conduct Follow Through workshops during the summer.

COMPREHENSIVE SERVICES

Julia M. Haven*

One of the unique aspects of the Follow Through Program has been the continuance of "related services" for children in target schools which were introduced in Head Start. These include health services, both examination and treatment of physical and dental needs; nutrition including meals and snacks, psychological services, a social worker, and parent involvement for home improvement.

Those of us who have long been associated with public school teaching and administration, realize the staff limitations to carry on the extended services for all children which are now under study and examination in Follow Through. Data are being collected concerning the effect of related services as well as the impact of the "model sponsor" program on pupil improvement.

Because Follow Through is a research program with specific controls, evaluation of outcomes will not be available until the programs have been under way for about three years. This appears to be a sound approach because of the experimental nature of the groups, and will hopefully provide better behavioral, physical, and academic findings. The longer period of evaluating the services and desired changes among children also provides an opportunity to examine parental growth and its effect on pupil and environmental change.

We knew that nutrition improved by providing these youngsters with

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better meals; and the opportunity for continuing dental and medical care has produced positive change. We have seen it in terms of the welfare of the children, their improved health, and more regular school attendance.

Another point that I think has been very significant in all of our supplementary services is the fact that we have had introduced in classrooms the teacher aide and the volunteer worker. The use of the teacher aide has certainly provided a new approach that has been sweeping the whole nation in terms of helping schools. The teacher aide program is being adopted in many schools that are not called target schools. We are having new types of training for teacher aide programs and the volunteer workers. One of our responsibilities as school people and professionals is the need to be careful when examining the role of all of these service people so that we do not put anyone in a position where children may be jeopardized. For example, a request was made as to how long it would take to train volunteers to work with children diagnosed as "dyslectic." This is a critical and controversial area and it would be questionable to use volunteers in working with children having this specific problem. This is not the role of a volunteer. They may assist the teacher in routine activities, but children having specific problems need professionally trained personnel. This is something we are learning in terms of all of our supplementary services -- to place people in a role where they do not feel threatened, where children will have the best possible care, and where the teacher is assuming the major leadership role.

We have mentioned medical, dental, and nutritional factors; parental involvement, teacher aides and volunteers; but one of our most difficult fields to get adequate service is in psychological testing and analysis.

These services, for the most part, have been contracted; they are taken on a part-time basis from the existing school system or from a local university. Here again, while these are helpful resources, we need to examine with great care whether it is achieving what we hoped for in broad test analysis.

The need for competent social workers and their services to the children and parents in the homes is well established. The social worker often acts as a liaison or interpreter of the school program to parents often having little educational background. The social worker has become an integral part of the community school team through interpreting school needs to the home and home needs to the school. This is a relatively new dimension for education and community activity, since the social worker is no longer considered a truant or correctional officer, but a professional assistant who establishes continuing contacts with home and school.

The nature of the services and the continuation of the services are vital. The nature of our new federally funded programs coming out of the U. S. Office of Education, our state department and local school districts, must make an assessment in terms of the need and the types of services that can be given in that particular program area.

In a recent report on student expenditures for social reforms, it was stated that it is costing a minimum of $7,000 a year per student for Job Corps training. For children in institutions for the delinquent and neglected, but especially the delinquent, it costs approximately $8,500 per individual a year for rehabilitation. But across our nation, in our public schools, the average cost per pupil is $700 annually. Where did I get that figure? It came directly from the Commissioner's Report, in terms of one of

the new program thrusts. When we consider the national average of $700 per pupil cost in a classroom averaging between 27 and 40 children, we have to take a good, hard look at where the expenditure for the improvement of education and instruction is really going. There is growing awareness that education of a developmental and corrective nature must begin with the very young child, as is being demonstrated with Head Start and Follow Through programs, even at this experimental stage. Research has long indicated that education of very young children as it precedes more formal schooling, tends to strengthen and stabilize the continuous learning process.

President Nixon recently expressed his support for the downward extension of education for young children through day care centers, both publicly and privately owned, and which are partially subsidized by federal, state, and local funds. Operational requirements for such centers and the care of young children would include the provision for professionally qualified personnel, aides, and educationally creative programs to motivate learning. Related services similar to those in Head Start and Follow Through would be an integral part of the establishment of day care centers across the nation. Within a relatively short time after the President proposed support for day care, hundreds of requests for establishment of such centers throughout our nation were set in process. It would appear that for the first time educationally, we are really beginning to go in the right direction. We are starting with the young child and moving right straight through. We are engaged in a program of prevention in terms of utilizing related services, in terms of improving academic requirements, and in the involvement

of parents and the community for better understanding of the total school program which hopefully may prevent future problems.

Quality education is costly. New innovative materials of both traditional and technological developments are a necessity to teach children in our contemporary world. People-to-people services are vital in the educational system, but the total child, including his care physically, socially, and intellectually, is the major outcome we seek when we talk about the whole child.

In spite of obvious hurdles and problem areas which seem to beset the educational environment today, there is still only one goal to be achieved -- good education for all children. Delays in funding, difficult administrative decisions, mobility of teachers, defensiveness of pupils and parents, and urbanization of population challenge the intelligence, the creativity, and the sense of responsibility of every educator. The combined efforts as well as the deep desire of the best thinkers in this nation will resolve the seeming educational dilemma, and will effectively build a stronger education structure to serve all the children from infancy throughout the whole school experience, is gaining support at every level of our society. The understanding that education involves the physical, social, and intellectual well-being of every child is rapidly becoming a reality. The local community, the state departments of education, professional organizations, civic and service groups, as well as the federal government, are joining forces to establish education in its highest sense.

EVALUATION OF SELECTED FOLLOW THROUGH PROJECTS: THE PROCESS

Robert S. Soar*

One of the critically important problems confronting American education today is that of developing effective procedures for teaching disadvantaged children. Programs specifically intended to foster growth in disadvantaged pupils (cf. Head Start) have sometimes succeeded and sometimes failed, but the reasons for the differences in result are not clear.

Recent findings have produced significant advances in knowledge of the specific teacher behaviors which produce different kinds of growth in children. But little of this research has been concerned with disadvantaged pupils. Rather, most studies have dealt with middle- or upper-class children, frequently suburban children.

A clear need exists for programs and teacher skills specifically tailored to the needs of the disadvantaged pupil. In order to know what these may be, intensive study of current programs and the teaching behaviors with which they are implemented seems essential. The variety of programs being implemented in Project Follow Through underlines the need for such an evaluation. The need to identify differences in pupil growth associated with differences between programs is central; differences in pupil growth associated with differences in teacher behavior (warmth and closeness of control as examples) could also be identified; and program effects could be

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assessed more accurately because teacher effects were being measured simultaneously. Finally, measures of pupil behavior in the classroom seem useful in themselves, in some cases, as measures of program outcome. Examples might be measures of complex cognitive activity of pupils, the supportiveness of interaction between pupils, or the responsibility and self-directedness pupils show in carrying out the work of the classroom.

So far as is known, there has been no attempt to examine programs for disadvantaged pupils in a way which would permit similarities and differences between them to be related to pupil growth. The procedures which have been highly successful in studying teacher-pupil behavior have not been used in studying the effectiveness of the programs. That is, the approach to examining differences in behavior between teachers which has sought multiple underlying dimensions along which the behaviors could be scaled has been fruitful, and could well be extended to the study of programs.

Evaluation of programs is typically concerned only with the question of whether pupils from one program differ at the year's end from those from another. While this is critical minimum information to have about a program, it seems even more useful to know which aspects of the program produced the difference -- that is, which aspects "worked" and which did not; which aspects, if emphasized, might produce even more growth; which aspects could be dropped without loss; and which aspects of different programs might be integrated to produce an even more effective program -- a sort of "bootstrap" effect.

It seems clear that some part of the differences in pupil growth across programs is likely to be a function of differences between teachers,

rather than of the programs themselves. Alternatively, it may be that the programs themselves operate to produce systematic differences in teacher style (the Engelmann-Becker program clearly does; it seems likely that the Matrix Games might support a more "inquiry-like" pattern of behavior on the part of the teacher; and the teacher in the Responsive Environment might feel freed, to a degree, of the need for cognitive interaction with pupils). Specific teacher training other than in the use of the program might then be unnecessary. Or it might be possible that the effectiveness of a program might depend on the style of teacher behavior (warmth, degree of control, for example) with which it is implemented. This, then, would raise the possibility that the same results might be achieved by specific teacher preparation, focusing on producing teacher behavior of the optimal style; or that the effectiveness of the program might be increased by such specific teacher preparation (to create a warm but highly structured classroom, for instance). Alternatively, identification of the variation in pupil growth associated with differences in teacher style might result simply in the reduction of variance which would otherwise be "error," resulting in a more sensitive test of differences in effectiveness between programs. Presumably both effects might be found simultaneously.

Effects on curriculum development might be expected as well. The cognitive level of classroom activity, if positively related to pupil growth, would support development of such material as the Matrix Games; if negatively related (as Jensen [1969] suggests) would support development of simple materials.

Although the research reported here does not go beyond identification of dimensions of the instructional models and of teacher behaviors which

relate to pupil growth, these steps are clear predecessors to the further possible phases of program reorganization or further teacher training.

The literature suggests that disadvantaged pupils differ from advantaged in language (Deutsch, 1967; Bernstein, 1967), self-concept (Coleman, 1966; Kvaraceus, 1965), and in learning style (Deutsch, 1967; Reissman, 1967; Jensen, 1969). There is reason, then, to question whether the teaching behavior, materials, or instructional program which is effective with "advantaged" pupils will be equally effective for disadvantaged pupils.

So far as teacher behavior is concerned, numbers of previous studies at different grade levels and with different subject matters consistently indicate positive relationships between indirectness of teacher behavior (accepting feeling, praising and encouraging, accepting pupil ideas, and asking questions), and pupil subject-matter growth. The same behavior also relates to favorable pupil attitudes. Research by Soar (1966), on the other hand, indicates that factor analysis of these data does not show a single factor of indirectness, but rather several factors which have elements of indirect behavior in them, some of which relate to pupil growth, and some of which do not. Further, there are suggestions that the more abstract the learning objective, the more important indirect control becomes (Soar, 1968). There is the further difficulty that past work of this sort has been done primarily with middle- and upper-class pupils.

Goldberg (1967) suggests that the teacher who is effective with disadvantaged children will be one who supplies a very warm emotional climate, but a relatively high degree of structure and control. If Goldberg's hypothesis is correct, this would be a classroom similar on one dimension to the classroom which is effective for advantaged pupils (warm), but opposite

in character on another dimension (direct). If the assumption is made that much of the work of the classroom appears highly abstract to the disadvantaged child, the disagreement is heightened.

The early work of Bereiter and Engelmann (1966) suggested that the cognitive growth of young disadvantaged children requires not only high control and high amounts of praise, but also high amounts of correction and criticism. It is clear that differing points of view exist in the literature.

A current publication which has become controversial is that of Jensen (1969). He suggests that repetition and learning by rote ("associative" learning) are especially functional for lower-class pupils in comparison to middle-class pupils, and in contrast to the general belief that conceptualization is an important aspect of effective teaching and learning. (He states this conclusion with respect to socio-economic class differences, although the most immediately relevant study cited confounded race (Negro and white) with social class, and earlier citations strongly suggested racial differences in patterns of learning abilities). Further examination of this conclusion seems highly desirable.

The utility of using systematic observation as a procedure for examining programs is increased by the fact that considerable experimental evidence exists indicating that a teacher who is taught to use an observation system to analyze his own teaching alters his teaching style in functional ways (Amidon, 1968; Amidon and Hough, 1967, pp. 252 and ff; Hough and Ober, 1966; Lohman, 1966; Sanders, 1966). Findings which identify specific aspects of teacher-pupil interaction which are related to pupil growth could be applied within ongoing programs, or taught on a wide scale to teachers not included in a currently existing program, with considerable hope that the

quality of instruction would be raised.

In summary, this approach offers the advantage of increased knowledge about what helps pupils grow and learn. Acquiring further information of this sort seems especially important for a pupil group whose learning characteristics appear to differ from those of other pupils, and for whom the nature of an optimum learning environment and curriculum is the subject of controversy. But it offers the further advantage that the form of the new knowledge is such that it is more readily implemented than has often been true in the past.

A question of immediate concern for observation research is that of the effect of the observer(s) on the process he is recording. The "conventional wisdom" of workers in the area seems to be that the observer soon becomes part of the woodwork for kids, if he never interacts with them and never takes part in any of the activities of the classroom (Medley and Mitzel, 1962). He ceases to be salient for the teacher much more slowly, probably, for most teachers, is never a concern for some teachers, and probably never ceases being a concern for some.

Only recently have empirical data appeared on the question. Masling and Stern (1969) observed two full days in each of 23 fourth and fifth grade classrooms, and correlated observational measures at differing separations in time from each other. They hypothesized that the effect of the observer should diminish in time, so that later observations should correlate more highly with each other than early ones would with late ones. They comment, "These correlations show no discernible pattern over time," (page 353), and conclude that two interpretations of the data are possible". . (a) observer influence is negligible . . (b) the effects of the observer are more complex

than had been foreseen and affect various aspects of teacher and pupil behavior differentially. It is difficult to tell from the present data which conclusion is more appropriate or even if both cannot legitimately be made." (p. 353).

Samph (1968) followed a different rationale in his study. Rather than assume that the effect of an observer would decrease with time, he made tape recordings without the teacher's knowledge. Teacher's agreement to participate in a study of pupil behavior was obtained, four microphones were installed in each classroom, and teachers were told that recording would not be begun until after pupils had had time to get used to the presence of the microphones. A month later teachers were told that recording would soon begin, but it had actually begun ten days after the microphones were installed. During this early period, control of baseline data were collected. After the completion of data collection, teachers were informed of the deception and their permission to use the data solicited. Teachers also indicated the style of teaching they thought ideal on the same dimensions studied in the research.

The finding of primary relevance to this study is the comparison of the control data to data collected when a previously scheduled observer was present in the classroom. Five variables from Flanders Interaction Analysis were tested for significance of change (all comparisons were in terms of deviations of each teacher from her own ideal). Significant change was found for two of the five variables: the amount of praise produced by the teacher increased, and the amount of criticism decreased. In each case the difference between means for the control and experimental conditions was about three quarters of a standard deviation. Again, this is the variability of

differences between observed and ideal behavior for individual teachers, and probably is much smaller than the variability of behavior across teachers.

None of the other three variables showed significant change. They were the total of teacher acceptance of pupil's ideas, the I/D ratio (the ratio of the teacher's acceptance of feeling, praise, acceptance of ideas and questioning to her lecturing, giving direction, and criticizing), and the i/d ratio (similar to I/D, but omitting questions and lecture, the primarily substantive categories). The changes were roughly a third of a standard deviation or less for the differences cited previously.

It seems reasonable to assume that the typical teacher works from a relatively simplistic view of the nature of effective teaching; and that for these teachers the view scarcely went beyond the idea that a teacher ought to praise pupils and should minimize criticism. The more complex measures of teacher behavior changed little, by this interpretation, because teachers did not teach by a conceptual scheme that included them.

Overall, even the statistically significant changes appear minor in terms of the variability of behavior from teacher to teacher, so that it seems reasonable to assume that teacher behavior does not change greatly as a consequence of the presence of an observer. If the change a teacher makes is in the direction of a truer implementation of her philosophy, as this study suggests; and if programs in Follow Through follow differing philosophies, as they appear to; then the effect of an observer should be to sharpen program differences. But the effect of the observer is probably not very great, these studies suggest, and primarily affects the most obvious measures. When it is recognized that the present study is analyzing in the neighborhood

of 300 measures of classroom behavior, it seems unlikely that very many of them will be affected very much.

Procedure

Sample

A sample of eight classrooms was drawn from each of seven Follow Through model programs, as well as two comparison classrooms from the same settings in which the programs were located. This procedure for selecting comparison classrooms was followed in the hope of equating, in a rough way, system-related variance for program and comparison classrooms. Insofar as possible, settings and programs were selected so as to permit data collection only in classrooms in which Stanford Research Institute (SRI) had collected complete data from pupils.

Programs were selected so as to permit observing in at least eight classrooms in each program, and in such a way as to attempt to represent the diversity of programs present in Follow Through (although the latter criterion was a subjective and uncertain one, at best). In addition, the Parent Implementation program was not represented, although a clear aspect of the diversity of Follow Through, since it is not classroom process oriented, and the present study is limited to examination of classroom process. A total of 70 classrooms was observed: eight program and two comparison classrooms from each of seven programs.

Two limitations to the meaningfulness of the results of this study follow from the way in which the sample was selected. One limitation is that SRI collected data in classrooms suggested by program sponsors as ones in which the program was being better implemented. This designation was made by sponsors at the beginning of the year, and on the basis of very

little information, and in some cases turned out after the fact not to have been the best choice. The other limitation, a function both of sample and of schedule, was that the programs had been in operation in some of these locations for only about three months at the time observation began. As a consequence, some classrooms were not exemplars of their programs, and some programs had had relatively little time to become well implemented at the time of data collection.

Observers and Training

Three teams of two observers each were used, all made up of graduate students in Education, except for the principal investigator and his wife, who have been involved for some years in research on systematic observation. The first week of the quarter was spent in training on the Teacher Practices Observation Record (TPOR),[1] beginning initially with a presentation of specific categories by way of film clips, followed by observation in classrooms, with discussion of differences in the categories recorded. The second week, training was carried out on the Florida Affective Categories (FLAC),[2] using classroom observation and discussion of differences from the beginning. The last day of the second week all teams observed in Follow Through classrooms to complete standardization in the use of the observation systems. The third week, all teams observed in a large city school system, since the number there was large enough that all three teams could work simultaneously and

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[1] Florida Educational Research and Development Council RESEARCH BULLETIN, Theory Into Practice Through Systematic Observation, Vol. 4, Spring, 1968.

[2] Soar, Robert S. Mimeo, 1969. College of Education, University of Florida, Gainesville, Florida.

could meet at the hotel after each day's observation to settle questions raised, and agree on common procedures. This week represented the transition from training to full-scale work in the field.

Methodology

A team of two observers spent a day in each classroom. It was not initially anticipated that this much time would be spent, but it was clear from initial experience that the nature of classroom activities changed in consistent fashion in many classrooms as the day progressed. One of the two observers completed the TPOR, the other used FLAC. After two forms had been completed (a total of six five-minute observation periods), the two observers reversed instruments and completed two more instruments.

As the observers observed, a tape recording was made simultaneously. The procedure which had been developed at the University of Florida and field tested in Follow Through classrooms, was one in which two wireless microphones were taken to the classroom, the teacher was asked to wear one, and one of the observers wore the other. Two FM receivers, tuned to the channels of the wireless microphones, were used to input the signal from one or the other of the wireless microphones to a small portable tape recorder. It was possible, then, to record the interaction a teacher might be having with a group of pupils by recording the signal from the wireless microphone the teacher was carrying, or other pupil groups could be recorded by one of the observers sitting as close as possible to the pupil group and recording the signal from that wireless microphone.

While this initially appeared to be a functional procedure, several difficulties arose in practice. One was that the transmitters and/or the receivers tended to drift over a period of time, so that distortion was

sometimes introduced into the recording without the observers being aware of it. Although it was possible to listen to the signal being input to the tape recorder using an earphone, the noise level in the classroom was typically high enough that the sound from the microphone could be distinguished from the ambient noise level only with difficulty, and with some uncertainty. The other difficulty was that in large cities the FM band was found to be completely full, so that there was not a free area in it to which the FM transmitters could be tuned. Since they are very low-powered equipment, whatever commercial stations were present at or near the same frequencies masked them out completely.

In addition, if the teacher seemed unusually uncomfortable about having observers present in the classroom, she was not asked to wear a wireless microphone. In the larger cities, then, and on occasion even in small towns, the wireless microphones either were not used, or only a wireless microphone worn by an observer was used. Beyond this, it became clear that even with experience the attention required by the equipment continued to be a distraction of some consequence to the observers.

In settings in which the wireless microphones were not used, recordings were obtained by observers moving about as inconspicuously as possible, carrying the tape recorder with them. Since the recorders were small battery-powered units, this was easily done. Although the distraction to the pupils was somewhat increased, it seemed generally not to be a source of difficulty.

In a completely free-play setting in a classroom with hard walls, floor and ceiling, it was difficult to obtain an intelligible recording. As a consequence, the data taken from tape will be unrepresentative to a degree.

Apart from the difficulties of making recordings in classrooms, there were other difficulties. The typical Follow Through classroom is an unusually diverse one in terms of the variety of activities going on simultaneously. This, in turn, means that the complexity of the observer's task is increased several fold over what it would be in the typical classroom a grade level or two higher. It seems likely that the higher the grade level, in general, the simpler the observer's task. Even with two observers watching for different classes of behaviors, it is inevitable that some portion of what occurred in the classrooms went unobserved. On the other hand, with the number of periods observed, the hope that the classroom would be reasonably accurately represented seemed reasonable.

Classroom Process Measures

Florida Affective Categories (FLAC) - This instrument is a modification of the South Carolina Observation Record which was developed to be used as a parallel observation schedule with Interaction Analysis (Soar, 1966). The original instrument drew heavily on the Hostility-Affection Schedule (Fowler, 1962), and the earlier versions of the Observation Schedule and Record (Medley and Mitzel, 1958, private communication). The rationale of the instrument, overall, was the development of a schedule which would emphasize behavior which Interaction Analysis ignored. Among these were the nonverbal expression of affect in the classroom, and the extent to which individual pupils or small groups of pupils were central in classroom activities. The nonverbal affect expression in the classroom seemed important to observe for two reasons: it seemed reasonable to assume that the teacher might be more careful of monitoring her verbal behavior than her nonverbal behavior when an observer was present (some evidence in earlier studies indicated this to be the case); and that relations between pupils might be an indicator of

the emotional and social climate of the classroom which would be less likely to change with the presence of an observer than the teacher behavior component.

The Hostility-Affection Schedule allotted separate sections to the eight combinations of teacher-pupil, verbal-nonverbal, and supportive-nonsupportive behavior. If, for example, the teacher raps on her desk for order, pushes a child who is out of line, or waits for whispering in the back of the room to stop before proceeding, any of these activities would be tallied as: teacher, nonverbal, nonsupportive. On the other hand, if a teacher gives a child a hug, ruffles a child's hair as she goes by, or listens intently to a child in a face-to-face situation, any of these would be tallied as: teacher, nonverbal, supportive.

In the grouping item, group size is indicated, as well as what the group is doing -- whether it is task or fun -- and whether the group is working with an adult or autonomously. The interest-attention rating is given on the basis of the percentage of children in the classroom who appear to be interested or involved in some aspect of the work of the classroom during the observation period.

Additional items were drawn from Katz, Peters, and Stein (1968), and Sears, Rau, and Alpert (1964), to represent behavior of younger children, and a number of new items were developed. These new items represented such behaviors as seeking or giving information, involvement in work or socialization, use of fantasy, evidence of the child planning a sequence of behavior to reach some goal, and responsibility-taking.

Research by Soar (1966) found that the earlier version of the instrument appeared to contribute approximately as much to the prediction of pupil

growth during the year on a variety of dimensions as did Interaction Analysis.

Teacher Practices Observation Record - The Teacher Practices Observation Record (TPOR) is an instrument developed to measure a teacher's practices in relationship with John Dewey's Experimentalism (Brown, 1968). It consists of 62 sign items of teacher behavior. In the original procedure the observer's task was to record, by checking, those items which occurred during three ten-minute observation periods. The time periods used in this project have been limited to five minutes, in order to parallel FLAC. There are no pedagogically "bad" items on the TPOR; every item describes a teacher behavior that is widely practiced in our public schools. However, half the items (the even numbers) describe behavior which reflects agreement with Experimentalism and would be espoused by John Dewey; the other half (the odd numbers) reflect disagreement.

Brown has done extensive research with the instrument, relating it to measures of beliefs, and has shown relations between a teacher's beliefs and teaching practices, and between an observer's beliefs and what he sees in the classroom.

The TPOR provides information which relates to the instructional or pedagogical practices employed in the classroom. The major classifications of items for recording behavior are (a) Nature of the Situation, (b) Nature of the Problem, (c) Development of Ideas, (d) Use of Subject Matter, (e) Evaluation of Pupil's Work, (f) Differentiation of Tasks, and (g) Motivation and Control. Data are produced describing the basic instructional situation as to whether the teacher or pupil is the center of attention, the extent to which pupils are active or passive, the extent to which the

teacher participates in pupil activities, the extent to which processes or products are stressed, and the amount of freedom which is permitted pupils. The nature of the problem is described as being organized around the concerns of the pupils or the concerns of the teacher or textbook, as well as the amount of perplexity and difficulty of study topics. Information is yielded as to whether ideas are treated in a "hypothetical" or "expository" manner, and whether they are dealt with in a creative or routine fashion. Subject matter is classified as to whether the pupils or teacher assumes primary responsibility for digging it up, whether it is taken from a single textbook or a wide range of sources, whether it is accurate or inaccurate. Whether the teacher evaluates the pupils' work or the pupils engage in self-evaluation is recorded. The degree to which the classroom tasks are differentiated for individual pupils is measured, along with the extrinsic-intrinsic nature of the motivation and the strictness-permissiveness of the disciplinary control.

Analysis of the data yielded by the TPCR can be based on a total or comprehensive score for all items, or on factor scores (partial scores for subgroups of items), depending on the precision and purposes desired.

Florida Taxonomy of Cognitive Behavior[1] - The original instrument was developed by the Florida group under Brown's leadership. Its history originates with The Taxonomy of Educational Objectives: The Cognitive Domain (Bloom and others, 1956), which was modified and extended by Sanders (1966) to provide an instrument to assess teacher lesson plans and teaching materials. The work of the Florida group has consisted of converting Sanders'

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[1]Florida Educational Research and Development Council RESEARCH BULLETIN, Theory Into Practice Through Systematic Observation, Vol. 4, Spring, 1969.

instrument to one for live observation in the classroom, and of carrying out developmental work with it in classrooms. The levels into which cognitive activity is divided are as follows:

1. Memory. The student is expected to recognize or remember information. He is not expected to compare, relate, or alter the material on his own.
2. Translation. At this level the student is expected to alter the form of the material with which he is dealing -- figurative to literal, behavioral to verbal, verbal to quantitative, pictorial to verbal, or abstract to concrete -- but not to change or evaluate the ideas represented.
3. Interpretation. The student is expected to identify similarities or differences, to compare on some other basis, to relate supporting evidence to a generalization, or to carry out a specified operation.
4. Application. The student is expected to bring together, without instruction, previously learned material which relates to a problem. Examples would include using word-attack skills to sound out a word, or deciding what mathematical operation is appropriate to solve a problem and carrying it through.
5. Analysis. This category is concerned with consciously applying the rules of thinking or of logic to the analysis of a problem.
6. Synthesis. This level involves bringing ideas together, as in application, but with the added requirement that the student reorganizes or changes them in such a way as to produce something new. Original productions of various sorts would be classified here.

7. Evaluation. This level requires two functions: establishing a set of criteria which are relevant to evaluate an idea or a product, and then evaluating the product or idea against these criteria.

In the development of the original instrument, data were collected from approximately 120 teachers, using this system in parallel with the Reciprocal Category System[1] and the Teacher Practices Observation Record. Analysis has indicated highly meaningful relationships (Wood, 1969; Bane, 1969).

Although the initial research plan anticipated using the original form of the instrument, a second Follow Through grant, which included support for instrument modification and development was awarded in time for a modification of the Cognitive Taxonomy to be developed and used for coding the tapes for the first year's data collection. This portion of the first year's work represents developmental work committed as part of the second year's project.

The modification was developed by a two-stage procedure. Initially, observers who had visited classrooms in the first-year data collection developed items to represent the levels of the Taxonomy from their memory of the classrooms. Then these items were tried out in tape listening, new ones developed as needed, and old ones modified or redefined. When the items stabilized, the form of the instrument was fixed and tape coding begun.

The usual recording procedure used with a sign system was modified as well. Ordinarily, an item is only tallied once in an observation period,

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[1]Florida Educational Research and Development Council RESEARCH BULLETIN, Theory Into Practice Through Systematic Observation, Vol. 4, Spring, 1968.

but it seemed possible that the high rate of pupil response which is emphasized in some programs might be seriously under-represented. In addition, the alternative of using only the level designations, but using them as a category system, was under consideration. The procedure of tallying each three seconds (or each interaction) was followed so that the data could be analyzed as though it had been collected by both procedures.

A frequent misconception is that only older children are capable of working at the higher cognitive levels. But if we consider a question popular with young children, "Why?", it is clearly a question at a high cognitive level. If a child formulates an answer, the answer is likely to be at the level of application at least; often synthesis; and if it judges the desirability of a behavior, may be at the level of evaluation. Similarly, the development of a Piagetan concept such as conservation clearly falls at the level of synthesis. The discussion that accompanies a story or a reading lesson may deal with questions such as, "What else might Jimmy have done?" (synthesis), or "Would it have been better if Jimmy had done something different? Why?" (evaluation).

The complexity of the concepts and the nature of the subject matter will differ from age to age, of course, but higher level thought processes seem clearly to be an important part of the development of the young child.

In fact, an idea that became more compelling as the instrument was developed, was that much of the learning done by pupils in the lower grades is learning how to do processes that occur with little thought for older pupils. For example, the item "Reads" is at the lowest cognitive level in the general purpose instrument, but is clearly a high-level item for pupils at the kindergarten-first grade level. Deriving the multiplication table

is a demanding operation, but as a tool in use it is low-level. Indeed, a realization that emerged from the current work which seems paradoxical in some ways, is that a part of the process of education consists of making higher-level behaviors lower level. That is, an activity which is initially complex, such as reading, becomes a lower-level one as it becomes automatic and routine. Thus, a goal of the educational process is to make complex operations so well learned that they become low-level operations and tools, in turn, for other higher-level operations.

Reciprocal Category System - The work with the original system (Flanders Interaction Analysis) has been summarized by Flanders (1965). A more usable source for developing skill in using the system is that of Amidon and Flanders (1963). A useful current summary of theory, research, and application is that of Amidon and Hough (1967). There are a number of modifications of the system. The one used in this research is that developed by Ober, Wood, and Roberts (1968). It offers a number of advantages over the original. The seven teacher categories of the Flanders System have been expanded to nine: teacher lecture is divided into that which is responsive to pupils and that which is teacher initiated, and the category of teacher criticism has been divided into a category for correction without criticism, and a category for correction with criticism. Category 10 remains silence and confusion as before. The major advance, however, is reformulating each of the categories into a form in which it can be used for pupil talk as well as for teacher talk. That is, teacher amplification of a pupil's idea is categorized as a 3; a pupil response, 15. Each category is changed from a teacher category to a pupil category by adding 1 as the first digit. The observer, then, learns nine categories

as he did with the Flanders System but has 18 to work with; and, as a consequence, the same variety of pupil talk is recorded as that of teacher talk. This permits identifying the extent to which pupils do such things as maintain order in the classroom, correct subject matter misunderstandings of other pupils, build on each other's ideas, contribute information, or express and accept feeling in the classroom. Practically speaking, this modification offers more than twice the richness of the data provided by the original Flanders System at little, if any, increase in the complexity of the observer's task.

The original instrument is probably the best validated of any, if validity is defined in terms of the prediction of change in pupils. The relevance of teacher behavior as measured by this instrument to pupil achievement growth has been most widely studied, but relationships with pupil attitudes have almost as commonly been found, and a smaller number of researches show the validity of the instrument for predicting such things as pupil change in personality, growth in creativity, and perceptions of the nature of the classroom (Soar, 1966). Analyses of data are now taking place.

REFERENCES

Amidon, E. J. Project on Student Teaching: The Effects of Teaching Interaction Analysis to Student Teachers. Proj. No. 2873, Coop. Res. Br., USOE, Temple University, 1968.

Amidon, E. J., & Flanders, N. A. The role of the teacher in the classroom. Minneapolis (429 Plymouth Bldg.): Paul S. Amidon & Assoc., 1963.

Amidon, E. J., & Hough, J. B. Introduction analysis: Theory, research and application. Reading, Mass.: Addison-Wesley, 1967.

Bane, R. K. Relationships between measures of experimental, cognitive, and affective teaching behavior and selected teacher characteristics. Unpublished doctoral dissertation, University of Florida, Gainesville, 1969.

Bereiter, C., & Engelmann, S. Teaching disadvantaged children in the preschool. New York: Prentice-Hall, 1966.

Bernstein, B. Social structure, language, and learning. In A. H. Passow, M. L. Goldberg, & A. J. Tannenbaum (Eds.), Education of the Disadvantaged. New York: Holt, Rinehart & Winston, 1967, pp. 225-244.

Bloom, B. S., et al. (Eds.) Taxonomy of educational objectives, handbook I: Cognitive domain. New York: McKay, 1956.

Brown, B. B. The experimental mind in education. New York: Harper & Row, 1968.

Coleman, J. S. Equality of educational opportunity. Washington: U. S. Government Printing Office, 1966.

Deutsch, M. The role of social class in language development and cognition. In A. H. Passow, M. L. Goldberg, & A. J. Tannenbaum (Eds.), Education of the disadvantaged. New York: Holt, Rinehart & Winston, 1967, pp. 214-224.

Flanders, N. A. Teacher influence, pupil attitudes, and achievement. Coop. Res. Monograph No. 12, OE-25040, Washington: U. S. Dept. of HEW,1965.

Fowler, B. D. Relations of teacher personality characteristics and attitudes to teacher-pupil rapport and emotional climate in the elementary classroom. Unpublished doctoral dissertation, Univ. of South Carolina, Columbia, S. C., 1962.

Glass, G. V., & Maguire, T. O. Abuses of factor scores. American Educational Research Journal, 1966, 3, 297-304.

Goldberg, M. L. Adapting teacher style to pupil differences: Teachers for disadvantaged children. In A. H. Passow, M. L. Goldberg, & A. J. Tannenbaum (Eds.), Education of the disadvantaged. New York: Holt, Rinehart & Winston, 1967, pp. 465-483.

Horn, J. L. An empirical comparison of various methods of computing factor scores. Educational and Psychological Measurement, 1965, 25, 313-322.

Hough, J., & Ober, R. The effect of training in interaction analysis on the verbal teaching behavior of preservice teachers. Paper presented at the annual meeting of the American Ed. Res. Assoc., Chicago, Ill., Feb., 1966.

Jennrich, R. I., & Sampson, P. F. Rotation for simple loadings. Psychometrika, 1966, 31, 312-323.

Jensen, A. R. How much can we boost IQ and scholastic achievement? Harvard Education Review, 1969, 39, 1-123.

Katz, L. G., Peters, D. L., & Stein, N. S. Observing behavior in kindergarten and preschool classes. Childhood Education, 1968, 44, 6, pp. 400-405.

Kvaraceus, W. Negro self-concept. New York: McGraw-Hill, 1965.

Lohman, E. A study of the effect of preservice training in interaction analysis on the verbal behavior of student teachers. Unpublished doctoral dissertation, The Ohio State University, Columbus, O., 1966.

Masling, J., & Stern, G. Effect of the observer in the classroom. Journal of Educational Psychology, 1969, 60, 351-354.

Medley, D. M. & Mitzel, H. E. Measuring classroom behavior by systematic observation. In Gage, N. L. (Ed.), Handbook of research on teaching. Chicago: Rand McNally & Co., 1963.

Ober, R. L., Wood, S. E., & Roberts, A. The development of a reciprocal category system for assessing teacher-student classroom verbal interaction. Paper presented at the annual meeting of the American Educational Research Association, Chicago, February, 1968.

Reissman, F. The strategy of style. In A. H. Passow, M. L. Goldberg, & A. J. Tannenbaum (Eds.), Education of the disadvantaged. New York: Holt, Rinehart & Winston, 1967, pp. 326-332.

Samph, T. Observer effects on teacher behavior. Unpublished doctoral dissertation, University of Michigan, Ann Arbor, 1968.

Sanders, N. M. Classroom questions: What kind? New York: Harper & Row, 1966.

Sears, R., Ray, L., & Alpert, R. Identification and child rearing. Stanford University Press, 1964.

Soar, R. S. An integrative approach to classroom learning. NIMH project numbers 5-R11 MH 01096 to the University of South Carolina, and 7-R11 MH 02045 to Temple University, Philadelphia, Pa., 1966.

Soar, R. S. Optimum teacher-pupil interaction for pupil growth. Educational Leadership Research Supplement, December 1968, 26 (3), pp. 275-280.

Wood, S. E. An analysis of three systems for observing classroom behavior. Unpublished doctoral dissertation, University of Florida, Gainesville, 1969.

THE PARENT EDUCATORS FOLLOW THROUGH MODEL IN TAMPA, FLORIDA

Clara C. Nuccio*

The primary purpose of Project Follow Through in Tampa, Florida, is to develop a successful school program which will serve as a model to combat the problems of 28.4 percent of the families in Hillsborough County who meet the OEO poverty criteria. This is the third year the program has been in operation. The Tampa project was one of the original group of 30 Follow Through projects started in 1967. At that time it was self-sponsored. Last year our community was granted the privilege of researching the Florida Parent Education Model, which was the model that best paralleled what we were attempting to do.

At the present time, the program serves 360 children in 12 primary classes in three elementary schools. The project is designed to continue the learning process started by Head Start into the regular school system. It is the vehicle for implementing changes designed to prepare children to function in the 21st Century. In addition to the usual academic offerings, the program renders medical, dental, nutritional, psychological, and social services. Parent involvement is sought in numerous ways for the project places strong emphasis on the families of its pupils. Continuous effort is made to give aid in every possible way so that a family unit will become more closely tied and healthier - physically, mentally, and emotionally. A positive home environment is believed to be the most significant factor

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in structuring successful lives. For this reason, the program endeavors to implement the Florida Parent Education Follow Through Model which is designed to work directly in the home with the mother to develop a learning situation which may lead to better school and life performance. The model also provides ways of changing the classroom organization and teaching pattern through the use of paraprofessionals and curriculum development based on the work of Jean Piaget.

In the intensive curriculum program headed by a curriculum team, the children are encouraged to learn independently through self-discovery. An attempt is made to accommodate the school experience to the needs of the children in the way of building a solid base for formal learning. Equipment, materials, and personnel are made available to promote and facilitate learning activities in reading, listening, mathematics, science, social studies, cultural arts, arts and crafts, and motor perception. Activities that are related to the child's experiences and to his specifically identified needs and interests are stressed.

The health component of the program provides for a complete physical examination and follow-up corrections for each child of low income level participating in Project Follow Through. Effort is made to prevent physical and dental problems through the combined services of a staff nurse and participating doctors and dentists. The children's instructional program includes developing and reinforcing positive attitudes and habits towards health and personal hygiene.

The nutritional program is designed to expose the child to situations which are conducive to establishing and strengthening better eating habits and acceptable behavior at mealtime. Breakfast, lunch and snack for each

Follow Through participant is part of the curriculum. Emphasis is on learning to eat a variety of nourishing food and on related social behavior.

One social worker is assigned to the Follow Through staff to help teachers and children and their families. She visits in the classrooms and in the homes, collecting needed data to facilitate assistance with help from other community agencies, and she assists the nurse with the health services. In addition, she is responsible for parent involvement which includes numerous activities: parent meetings, basic education, encouraging and organizing services of volunteers, and helping the PAC with their activities.

The project has an on-going in-service training program conducted by members of the Follow Through staff and consultants from the University of Florida, that assist in a continuous evaluation and up-grading of the program.

It is hoped that the interlacing of all facets of the program into a unified whole will provide the concerted effort required to overcome or compensate for the economical and educational limitations suffered by disadvantaged children, and so increase the probability for success in school and in life. For we believe that "a child is a child wherever he may be. But a child is a child only once . . . and some say that if he is not a child who is helped to grow, then he may not be the adult he could have been."

FOLLOW THROUGH IN JACKSONVILLE, FLORIDA

Russell O. Alderman*

During the 1968-69 school year, and prior to a Follow Through Program Grant, Jacksonville implemented a program using the Florida Parent Model in five selected kindergarten classes, receiving assistance from Title III, Title I, and local county funds. Follow Through Program guidelines were followed in the operation of this program to pave the way for a Follow Through Grant award to be made to Jacksonville for the 1969-70 school year.

The first grant award of Follow Through Program funds was received June 11, 1969, and provided $86,250 for program operation from June 1, 1969 to August 31, 1970.

To date, the Jacksonville Follow Through Program is operated in cooperation with a Title III project, which provides for the innovative curriculum design and certain instructional media not available with Follow Through Program funds. Additional assistance is also provided by Title I and the County Operating Budget.

The present student population of 125 students in five classes is located in the following two schools:

Isaiah Blocker Elementary School No. 135	Two first grade classes One kindergarten class
Moncrief Elementary School No. 124	Two kindergarten classes

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*Follow Through Coordinator for Duval County, Florida.

Three adults are assigned to each classroom and are identified as (1) a teacher (professional), and (2) two parent educators (paraprofessionals).

The Jacksonville Follow Through Program has adopted the Florida Parent Education Model developed by Dr. Ira J. Gordon, Director, Institute for Development of Human Resources, University of Florida, Gainesville, Florida.

Parents have, from the beginning, been active participants in the Follow Through Program. The Greater Jacksonville Economic Opportunity, Inc., the local community action agency, has provided assistance to the program and has indicated continued cooperation and assistance.

Comprehensive services including (1) instruction, (2) medical and dental, (3) nutrition, (4) social, (5) psychological, and (6) staff development are also a part of our program.

The evaluation procedures included in the project design are used to obtain a comprehensive assessment of the program.

EDUCATION IN THE 70'S*

Ira J. Gordon **

Many of the issues and needs of American education in the 1970's emerged as problems in the 1960's. Some have been with us for a considerably longer period of time. Among the pertinent issues are:

1. Who should be educated?
2. Where should education take place?
3. What should they learn?
4. How should they be taught?
5. Who should control?
6. Who should teach?
7. How should teachers be prepared?
8. What are the limits to "education"?
9. How should we evaluate?
10. What basic research needs to be done?

This paper, obviously, cannot deal with these in any depth. What is presented below are ideas about development of new rather than maintenance of existing programs.

First, who should be educated? We define the responsibility for free public education in the United States as extending from entry into the first grade until graduation from high school. We define the person

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entitled to free public education as the child between the ages of 6 and 18. The requirements of living in the 1970's suggest a redefinition. The total family will be our target population. This means an extension in both directions of the age span. Kindergarten in many states is already part of the public school system, but is not universal. Further, especially for large portions of our population, preschool programs in group settings for 18-month-olds, and other procedures beginning at 3 months, should be rapidly but carefully developed so that deficiencies which presently exist as children enter school can be substantially reduced. Those youngsters who can profit from earlier exposure to systematic learning must receive a sound beginning. The present system of preschool education below entry into first grade is a haphazard mix of crash "compensatory" programs, good but expensive private schools, inadequate day care and babysitting, and no program at all. A requirement in the coming decade is the organization of concerted efforts to bring some order out of the chaos of preschool education.

Movement in this direction requires an equivalent effort in adult education. Effective school programs must include parent involvement. Yet, involving a parent as an observer, visitor, or volunteer does not provide sufficient training in those roles parents can perform to enhance the intellectual and personal development of their children at home. Adult education should include training for family living and child rearing in addition to job training and retraining as the job market changes, education for leisure as the work week and work year decrease, and education for personal development. If the family is the target, programs of preparation for effective family living, including

provision of adequate intellectual and personal settings for children, can unite both preschool and adult education into a systematic rather than a fragmentary attack.

The requirement for the coming decade is continuous investigation into both the causes of mental retardation and exceptionality as well as the continued development of effective programs of remediation. Much of the research shows that organizational patterns such as special classes will not solve the needs of these children. The use of auto-instructional devices and other individually oriented approaches within normal school settings seem to offer more effective avenues. What is required is continued federal support not only for programs training teachers for work with exceptional children, but also to enable schools to involve exceptional children as much as possible in the regular school program.

To accomplish these extensions, we need to move away from the type of state and federal funding in which a specific number of children count as a unit and are entitled to a teacher. Funding patterns must be developed which do not utilize the normal classroom counting system, but which set differing amounts, on some type of cost effectiveness basis, recognizing that certain programs may be more expensive than our present classroom operations but yield more lasting results.

Second, where should education take place? Formal education has been confined to the classroom, although we know that other social agencies have educative functions. If we move toward new approaches to parent and adult education, particularly as they relate to the education of young children, the home will re-emerge as a central learning institution. Present research indicates that mothers can and wish to perform educa-

tional roles when they are taught via home visit approaches. The Children's Television Workshop offers one model for the introduction of organized, systematic, learning programs beamed at a particular age level. An emerging possibility for the 1970's is the use of electronic video recording (cassettes for T.V.) which enable the person at home to hear and see the same information as often as he wishes. The advantages of a home visit program are the personal touch and the selection of appropriate material. The advantage of television is its immediate availability to a wide section of the population. EVR offers some opportunity to combine these two approaches.

The major difficulty will be the creation of home learning materials which match the mother's background, education and motivation, the needs of the child and the family, and the goals of the program designers. Federal support, because of the expense, will be necessary for material and curriculum development, as well as the design of delivery systems, to make the home an adequate learning setting. New ways will evolve for feedback as well as selection of materials. Users need to inform developers of materials so that efficiency can be increased. Careful evaluation and research under controlled field conditions is essential. Teams of media technicians, subject-matter and child development specialists, and people from the broad spectrum of the social and behavioral sciences will need to function in a somewhat similar manner to the curriculum reformers of the 1950's, but with a more clear-cut recognition that the production of materials is only one phase of the total problem of curriculum and instruction.

The public school will continue as the major institution for children between the ages of 6 and 18, but it must be converted into a

community school with provisions for adult, technical, and vocational education and community activities. Adults should see the school as open and accessible to them for continuous learning throughout life. The procedures developed in Flint, Michigan, should be generalizable in many settings.

A phenomenon of the "war on poverty" was the emergence of preschool programs not directly under the aegis of boards of education or other state agencies. On the horizon is the emergence of a day care and child development industry and a large-scale development of private, preschool programs for those able to pay. In urban settings, "street" academies which offer programs to serve a variety of the needs of adolescents not currently met in the usual academic curriculum, are emerging. The private and parochial school systems are expanding. The development of pluralistic approaches to the provision of education, in which the former dominance of the public school system may be decreased, raises a host of problems for legislation. In what ways should these agencies become available for federal funds? What controls, both over program and accounting, should be developed? What possible alternatives should be made available for all children, not just those of parents who can either afford much or those who can afford nothing? How are options to be made available to the vast middle-class? I can do no more here than raise the issues.

Third, what should school-age children and preschoolers learn? With the high level of mobility of the American population and the chances of continued technological development, the issues of national curricula and national standards must move from political football to

logical and substantive debate. If we can adopt as one standard that any child, growing up in any section of the country and belonging to any subculture, should be able to function as an effective citizen in any section of the country and in contact with members of other subcultures, then we will at least move the debate to a discussion of what this requires. I believe that basic competence in language, in computation, and in interpersonal relationships are common needs of all our citizens. At the present time graduates of our high schools vary widely in their ability to speak, read, write, and handle mathematics basic to life in an urban technical world. Many lack skills for dealing with social issues. A basic requirement of American education in the area of the social studies is the development of curricula which have value overtones and commitments to American democracy along with historical, economic, and social information, so that the average American high school graduate will not be ignorant of his heritage and will be able to be an active participant in the continued development of the nation. Too many of our present students and adult population are ill informed about even such basic American documents as the Declaration of Independence, the Constitution, and the Bill of Rights. Further, cultural pluralism will be an increasingly critical notion in the next decade. We must provide students with information and experience so that all portions of our society will understand the contributions of all others and will value regional, ethnic, and religious differences.

One can learn a set of facts without placing them in a conceptual framework and without utilizing them for action. Our present concern with ecology, for example, indicates that students will need to understand

not only elements of biology but also economics, politics, social psychology and history so that they can make wise decisions when faced with choices about engineering projects which have environmental effects. Simply knowledge of facts in any one of these fields is insufficient. Curricula must be designed to relate facts to concepts to behavior. We need to develop the types of learning materials which cut across disciplines and which develop thought patterns involved in decision-making. These do not exist at the present time, nor do we presently turn out of graduate schools, in the disciplines or in education, people trained to develop such materials. Federal funds will be required for training material developers as well as for the development and assessment of learning materials. The whole delivery system needs to be reexamined.

Fourth, how should students be taught? Traditional learning theory has been sterile, but two mainstreams of psychological thought are beginning to make contributions to instruction: cognitive development and instrumental or operant learning. However, present data are insufficient to provide cues to teachers as guides for behavior in classroom, in using media, or in working in a home. It is in the field of instruction that more basic field research must be done, in a variety of settings, with students of all ages, faced with learning a variety of materials, before we shall develop a fairly consistent set of principles. It is remarkable that this statement can be made at the beginning of 1970, after 70 years of learning research since Pavlov. Most of what is known does not apply to the classroom setting. Federal initiative for basic research in classrooms rather than in infra-human learning laboratories is a fundamental requirement.

Technology is a central issue. We have not learned how to use it. We have been deficient in training teachers to utilize electronic means in classrooms. Most of the software prepared has been inadequate. There are, in addition, a number of theoretical as well as empirical problems. What is it that programs beamed to large audiences can teach most effectively? How much repetition must be provided? How can auto-instructional means be cheaply devised, utilizing cassettes, tape recorders, and eight millimeter film? How can material be up-dated? How can technology be used to allow the student some selection and control over the materials to which he is exposed? Can he check materials out like a library book? If current learning and cognitive theory suggest that the young child, especially, must be an active agent in his learning and deal with concrete objects, how can we cope with this problem?

This raises the question of "individualizing" instruction. How does individualizing instruction relate to the question of what should be learned? Is individualization a matter of rate or of content selection as well? It is, obviously, beyond the scope of most classroom teachers faced with thirty children to do more than mouth the slogan. How do we learn to use technology to free pupils to learn?

Fifth, where should the control of education reside? American doctrine has been local control, and fears have been expressed that federal funds means federal control. However, in the urban centers, demands for community control and decentralization will grow stronger in the next decade. Yet, it is obvious that the smaller unit is inadequate, even at the state level, to provide sufficient funds. I oppose large nonprogrammatic grants to school districts and states

because educational institutions will continue to do what they have always done. Innovation and initiative emerge when federal money is the carrot. It will not occur on the local level if money is simply awarded per number of children or number of units of instruction. This may be a harsh statement, it may be partly incorrect, but it is my view from experiences over the last twenty years.

We need some way of rewarding local initiative, encouraging variety and pluralistic programs to emerge at local levels with adequate support from government. But the skill required in proposal writing and the design of research and evaluation to accompany proposals does not exist in many local settings. The model developed in Follow Through of relating university and school systems in combined participation nationwide is a viable and desirable notion. It cannot occur readily if money is awarded to states. A program developed at a university some distance from the state may not be used because the tendency will be to turn to local institutions.

The pattern of encouraging universities and school systems to create programs in a national competition for funds, with decisions being made by scientific boards in the manner traditionally used by the National Institutes of Health, would tend to remove most of the stigma of federal control and decrease the chances of political rather than educational decision-making. Patterns of federal funding should move away from quota systems, regional allocations, and head counting. After those programs which are truly pilot and "cutting edge" have been sufficiently tested and become ready for large-scale service, they should be made available as rapidly as possible to all agencies capable of applying them.

Federal educational dollars for program development should be taken out of the pork barrel.

Sixth and seventh concern the status of teachers. Who should teach, and how should they be prepared? We must learn to use paraprofessional manpower more efficiently in the educational process. Currently, virtually no elementary teachers are trained to work with other teachers and to use paraprofessionals effectively. Ways must be found to train professionals and paraprofessionals as teaching teams, so that each understands the other. This is particularly important where they come from different ethnic and class backgrounds. Career development for both professionals and paraprofessionals has begun for Head Start and Follow Through paraprofessionals, but needs to be enlarged and extended for people not involved in present federal programs.

The content of teacher education needs revision. Our old discussions have centered around personal development versus a set of skills, methods versus content, the internship, and the proper mix of theory and practice. Generally, these discussions have been bitter, unproductive, and unrelated to empirical data. Unfortunately, research on teaching has not demonstrated a clear-cut picture of the "effective" teacher. One reason we cannot make clear statements is because the service and training programs funded previously by the Congress have provided insufficient evaluation funds. We can never answer the question of how teachers should be prepared until we are willing to invest in investigation. We know that accumulation of credits in college subject-matter or education courses relates hardly at all to effective classroom behavior. Yet, the college course has been our traditional model. We should invest

considerable funds in redesigning our teacher education programs, both at the pre and inservice level, for all those who will function in the classroom from paraprofessional to specialist.

Federal support should go to those educational institutions and school districts which not only plan their programs in detail, but also plan to describe the relationships of program components, teacher and pupil classroom behavior, and pupil achievement. The current state of the art of multivariate statistics and research design is such that this can be done. It should be launched on a competitive proposal basis by those universities and other teacher education institutions which seriously wish to investigate the question and which presently have the capability and the responsibility for training teachers. We do not need new organizations; we need effective funding and prodding of present institutions.

Eighth, what should be the nature and scope of "ancillary" services? Traditionally, school boards have not been vitally concerned with medical services for pupils, psychological services beyond diagnosis, social welfare services beyond those affecting absenteeism. The experiences of Head Start and Follow Through have indicated the tremendous value of comprehensive services for "disadvantaged" children. These comprehensive services can also be vital in the educational development of the large mass of middle-class children in the American schools. The question is: When is a frill not a frill? The family circumstances--housing, income, size, job pattern, emotional stability--are all variables which influence the intellectual and personal development of the child. Thus, they cannot be ignored or left to chance. What should be the limits of federal support for these services for all children? Where should

those legally charged with educational responsibilities stop and other agencies enter? How can we systematize the work of the various agencies? Pilot projects attempting to explore these issues and test them empirically should be funded in the coming decade. Such questions as, What are the "non-educational" needs of all American youth? How should these services be delivered? Who should be responsible? What difference does delivery make in educational achievement? can and should be attacked.

Ninth, throughout this paper I have referred to evaluation. No program should be funded without an adequate evaluation design. Until we insist that those who seek federal project funds accept the responsibility to demonstrate whether the money was used effectively, we shall waste a considerable portion of the federal education dollar. But there are a number of hard issues. In order to evaluate something, one must have yardsticks and goals. Who should determine the goals and what should be used as measuring rods? Standard achievement tests are not adequate measures for many of the goals we might seek and for many of the children in school. There has been a considerable push toward writing "behavioral objectives," but many of these efforts use huge energies of teacher time in trivial fashion. Should our goals be personal development, intellectual achievement, social change, or a mix of all three? The former separation of cognitive (intellectual) and affective (emotional) goals with a concentration on the former in curriculum programs seems to be ending as we realize more and more that decisions and behavior embody both.

Three requirements emerge: (1) funding to develop effective processes for stating and evaluating goal attainment, (2) substantial funding for evaluation in all projects described above, and (3) continued funding

for the training of evaluators at both the undergraduate and graduate level. In relation to the first requirement, if we are to urge school systems and universities to develop adequate proposals for meeting the issues of the 1970's, then their personnel need help in learning how to formulate their goals and how to think about ways to evaluate. They do not need package answers, but they need to be taught procedures involved in stating goals, programs, and measures. Very few school system personnel and few professors in our universities are able to do this at the present time. Siphoning off technically skilled personnel to R and D Centers and regional labs removed the very people from the university and school system framework who possessed a modicum of skill and isolated them from the people whom they should be serving. We should examine the policy of setting up new organizations because of the effects they have on scarce manpower. I would urge that we invest heavily in the methodology of programmatic research in substantive fields.

The tenth issue is the role of basic research. Our current knowledge is inadequate about learning and instruction, about program design, and about curriculum development. We are unable to answer with any degree of certitude questions about the effect of television on children's learning and behavior. We know even less, in any systematic fashion, about the effects of Title I programs, general school programs, computer assisted instruction, community action, etc. Our knowledge of the effects that family life variables have upon the behavior, attitudes, and development of children are meager. A recent NIMH analysis by Yarrow, et al., suggests that we still know very little about the specific effects of patterns of child rearing on the behavior and development of children.

Basic research, therefore, is needed, including research on methodology. Generally, purely methodological studies have not been well funded either through the U. S. Office of Education or the National Institutes of Health and Mental Health, but they are basic to the solution of many of our problems. If we cannot design adequately and measure effectively, then we will be unable to know if and why any of our efforts have succeeded.

We need careful studies embedded in the service programs as well as separate basic field research. We need to develop funding patterns so that as a part of a teacher education process, or a curriculum development design, or an investigation of a delivery system such as T.V., small careful bits of work can be done. In effect, this is a piggyback arrangement of research on a service program. At the present time it is extremely difficult to receive adequate support for such efforts. We should encourage research workers to utilize other programs and to build their work into ongoing field studies.

Funds are needed to train basic researchers. An effective procedure for training is the utilization of graduate students in ongoing research efforts in universities and schools. Through the allocation of federal funds we should encourage graduate assistantships and research assistantships as major training vehicles, in preference to fellowship programs. Most fellowship programs are course and theory oriented and do not provide students with practical research experience in the field setting in which they will eventually work. The training of educational basic researchers should require participation in research in school settings and other educational settings off campus as a fundamental part of the program.

If we broaden our definitions and our activities as suggested in this paper beyond the classroom building, then we must increase the safeguards for non-invasion of privacy and for strict adherence to appropriate professional ethics. The National Institute of Health requirement of a careful review to be sure no possible unavoidable harm can be done in experimentation on humans in the medical field should be used as a model in education. Parents, teachers, and students should be informed as much as possible about the nature of programs and should be given as much choice as possible as to whether they wish to participate. This should be particularly true in innovative work where it is not clear what the outcomes may be. Although one can raise serious scientific objections to the use of volunteers, the concern for the person should always be primary in any of our efforts.

Conclusion

It is impossible here to do more than outline some of the issues. Since all relate to each other, a basic policy commitment should be made in favor of comprehensive rather than piecemeal program development. Funds should go to programs, institutions, agencies which develop comprehensive attacks on a variety of these issues. Longitudinal, comprehensive, programmatic investigation with clear ramifications across many of the ten issues should be encouraged. Support must be given long enough, in large enough sums, so that programs can be developed and tested for a sufficient period of time to yield the best picture of just what it is they do, and what unforeseen side effects they have.

We need more inter-agency cooperation so that a single comprehensive project can be funded by several agencies within HEW or in combination with other departments, such as HUD and Labor, without forcing the program

developers to write separate pieces using separate budget, guideline and narrative styles in order to develop a comprehensive attack. To one outside of government there seems little logic in some of the high walls between agencies.

Funding policies should be developed to encourage established institutions to explore new ways of working rather than to create new "labs" which use scarce dollars and talent. Most likely, the best investigations come from an individual or from a small group of researchers who choose to work together and design efforts around their own perspectives. This is in opposition to creating a general plan for a research lab and employing "hired hands" to do the work. Clusters of interested, competent people will grow around a research effort through choice rather than through even high pressure recruiting practices. Further, fundamental lasting change has to occur in the established institutions. It is far easier for them to sluff off effects or the input from new agencies if no basic changes occur in their own organization.

Those who create policies must also recognize the fact that results are usually not instant but developmental. Requirements for quick change or large-scale growth impose obligations and hazards on program development. It is far better to recognize that good programs take time to evolve and even more time to show lasting results.

To best meet these ten issues, continued federal support, rather than block grants to states will be the most effective vehicle. Federal support should be for programs rather than sprinkled in small doses to each school district. There should be a careful selection of systematic approaches rather than political or regional allocation of funds. There

should, in addition, be seed and risk money for pilot projects proposed by thoughtful investigators, even though they seem quite removed from traditional approaches. The investment in brains may be even more important than the total number of dollars expended.

We enter the 1970's with a set of at least the ten issues raised at the beginning of this paper. No doubt we will leave the decade with the same set of issues. Hopefully, with sufficient programs, research, and evaluation, we may be asking these questions in newer and more sophisticated ways. We may have some sets of answers to enable us to approach the 1980's with confidence.

Appendix A

List of Follow Through

PROGRAM SPONSORS

University of Arizona
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Bank Street College of Education
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California State Dept. of Education
Division of Compensatory Education
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University of Florida
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University of Pittsburgh
Learning Research and Development Center
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